Abhrajyoti Kundu
Computer Science & IT (CS)

HOME
MY TEST
BOOKMARKS
MY PROFILE
REPORTS
BUY PACKAGE
NEWS
TEST SCHEDULE

BASIC LEVEL FULL SYLLABUS TEST -1 (GATE 2023) - REPORTS

OVERALL ANALYSIS | COMPARISON REPORT | SOLUTION REPORT

ALL(65) CORRECT(44) INCORRECT(14) SKIPPED(7)

Q. 1 Have any Doubt ?

The sum of the possible values of x satisfying the equation $|x+6|+|x-7|=14$ is_____

1 (1 - 1) Your answer is Correct1

Solution :
1 (1 - 1)

$$|x+6|+|x-7| = 14$$

Case-1: $x < -6$

$$-(x+6)-(x-7) = 14$$
$$-2x+1 = 14$$
$$2x = -\frac{13}{2} = -6.5$$

Case-2: $-6 \le x < 7$

$$(x+6)-(x-7) = 14$$
$$13 = 14 \text{ which is not possible}$$

Case-3: $x \ge 7$

$$(x+6)+(x-7) = 14$$
$$2x-1 = 14$$
$$2x = 15$$
$$x = 7.5$$

$\therefore$ Sum of all possible values of $x = 7.5 - 6.5 = 1$

QUESTION ANALYTICS +

Q. 2 Have any Doubt ?

The sum of all 3 digit numbers that leave a remainder of '2' when divided by 3 is____.

164850 (16849 - 164851) Your answer is Correct164850

Solution :
164850 (16849 - 164851)
The series will be the form:
101, 104, 107, ..., 995, 998.

It will have a total of 300 terms (999 – 100 + 1 = 900 take $\frac{1}{3}$ of this since only 1 term is there in every 3)

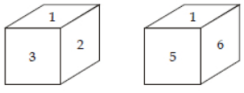
Now,

$$\text{Sum} = \frac{(1^{st}\text{ Number} + n^{th}\text{ Number})}{2} \times n$$
$$= \frac{(101+998)}{2} \times 300 = 164850$$

QUESTION ANALYTICS +

Q. 3 Have any Doubt ?

Two positions of a dice are shown. When 4 is at bottom, the number that will be on the top is____.



A 1 Your answer is Correct

Solution :
(a)
From figures, we conclude that 2, 3, 5 and 6 are adjacent to 1. Therefore, 4 lies opposite 1. Hence, when 4 is at the bottom, then 1 must be on the top.

B 4

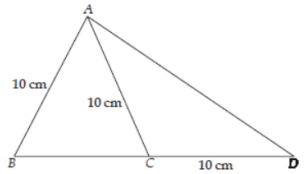
C 5

D 6

QUESTION ANALYTICS +

Q. 4 Have any Doubt ?

In the figure, if $\angle ADB = 20°$, then the value of $\angle BAD$ is_____ degrees.



120 (120 - 120) Correct Option

Solution :
120 (120 - 120)

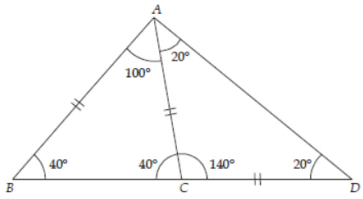
$$AB = AC = CD$$
$$\angle CAD = \angle CDA = 20° \text{ and } \angle ABC = \angle ACB$$

In ΔACD

$$\angle ACD + \angle CAD + \angle CDA = 180°$$
$$\angle ACD = 180° - 20° - 20° = 140°$$
$$\angle ACB = 180° - 140° = 40° = \angle ABC$$

Similarly in ΔABC

$$\angle BAC = 180° - 40° - 40° = 100°$$
$$\angle BAD = 100° + 20° = 120°$$



Your Answer is 100

QUESTION ANALYTICS +

Q. 5 Have any Doubt ?

All who studies commerce enjoy sports. No tax consultant enjoys in sports. All those who enjoy sports love classical music.
If the above sentences are true, which of the following must be true?

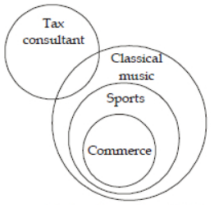
A No one who enjoy classical music, is a tax consultant by profession.

B Every tax consultant enjoy classical music.

C No tax consultant enjoys classical music.

D No tax consultant studies commerce. Your answer is **Correct**

Solution :
(d)



From the Venn diagram, we can see that only option (d) is possible.

QUESTION ANALYTICS +

Q. 6 Have any Doubt ?

In the coordinate system, the centre of a circle lies at (2, 3). If point A with coordinates (−1, 7) does not lies outside the circle, which of the following points must lie inside the circle?

A (0, 7) Correct Option

Solution :
(a)
Point A(–1, 7) does not lies outside the circle. So, point can lie on the circle or inside the circle.
Distance of A from center = 5 units
So for the points to lie inside the circle, the distance of given points from centre has to be less than 5 units.
Point (i): Distance between (0, 7) and (2, 3) = $\sqrt{20}$, which is less than 5. Hence, it must lie inside the circle.
Point (ii): Distance between (5, –1) and (2, 3) = 5
Point (iii): Distance between (–2, 7) and (2, 3) = $4\sqrt{2}$
Which is more than 5. So, option (a) is correct.

B (5, −1)

C (−2, 7)

D Both (a) and (b) Your answer is IN-CORRECT

QUESTION ANALYTICS +

Q. 7 Have any Doubt ?

_____You have a doubt, why not go and verify? I shall be waiting in the shade____ this Banyan tree till you come back____ me.
The option that best fills the blanks in the above sentence would be:

A if; under; on

B as; of; for

C as; of; at

D if; of; to Your answer is Correct

Solution :
(d)
Since the first sentence is a question, if is more appropriate than as. Shade of this tree and back to me are the appropriate usages.

QUESTION ANALYTICS +

Q. 8 Have any Doubt ?

The cost of fencing a square field at the rate of Rs. 20 per metre is Rs. 10080. How much will it cost to lay a three metre wide pavement along the fencing inside the field at the rate of Rs. 50 per square metre?

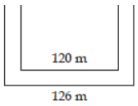
A Rs. 793800

B Rs. 720000

C Rs. 79380

D Rs. 73800 Your answer is Correct

Solution :
(d)



$$\text{Perimeter} = \frac{\text{Total cost}}{\text{Cost per metre}} = \frac{10080}{20} = 504 \text{ m}$$

$$\text{Side of the square} = \frac{504}{4} = 126 \text{ m}$$

$$\text{Side of inner square} = 126 - 2 \times 3 = 120 \text{ m}$$

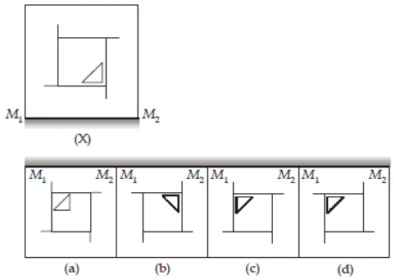
$$\text{Area of pavement} = 126 \times 126 - 120 \times 120 = 246 \times 6 = 1476 \text{ m}^2$$

$$\therefore \quad \text{Cost of pavement} = 1476 \times 50 = \text{Rs. } 73800$$

QUESTION ANALYTICS +

Q. 9 Have any Doubt ?

If M_1 and M_2 represents a mirror surface, which of the following is the correct representation of (X)?



A a

B b — Your answer is **Correct**

Solution :
(b)

C c

D d

QUESTION ANALYTICS +

Q. 10 Have any Doubt ?

Which of the following sentence is correct?

A I have five twenty rupee notes — Your answer is **Correct**

Solution :
(a)
The singular noun 'rupee' is used before note or notes.

B I have five twenty rupees notes

C I have five twenty rupee note

D None of these

QUESTION ANALYTICS +